

REMARKS

Applicants have amended claim 1 to promote clarity and amended the specification and claim 12 to correct typographical errors. Applicants have also added a limitation in claim 1 to more particularly point out and distinctly claim the subject matter which they regard as their invention. Support for this limitation can be found in the specification at page 6, lines 33-38. No new matter has been introduced by the amendments.

Claims 1-20 are now pending. Applicants request that the Examiner reconsider this application, as amended, in view of the following remarks.

Rejections under 35 U.S.C. § 112, second paragraph

The Examiner rejects claims 1-20 for indefiniteness, asserting that the word "obtainable" recited in claim 1, from which claims 2-20 depend, renders all of the claims indefinite.

Applicants have replaced the word at issue with "obtained" to rectify the defect.

Rejections under 35 U.S.C. § 102

Claims 1-13 and 16-19 are rejected for anticipation on two grounds, each of which is traversed below:

I

The Examiner rejects claims 1-3, 5-9, 11, 12, 18, and 19 under 35 U.S.C. § 102(b) relying on Seitz et al., U.S. Patent 5,176,985 (Seitz). Claim 1 will be discussed first.

Claim 1, as amended, covers a water-thinnable polyurethane having at least two free OH groups, the polyurethane being obtained by reacting an alkanolamine with a NCO compound and subsequently reacting the resulting product with a cyclic carboxylic anhydride. The NCO compound is prepared by reacting polyisocyanate with saturated polyester polyol or polyether polyol.

Seitz discloses a radiation-sensitive polyurethane obtained by reacting a NCO compound with an amino compound, and subsequently reacting the resulting product with an acid anhydride. The NCO compound, unlike that recited in claim 1, is prepared by reacting

polyisocyanate with an ethylenically mono- or poly-unsaturated polyol. See column 6, lines 46. As such, the NCO compounds thus prepared contain unsaturated moieties, derived from the polyol. The subsequent reactions (including reacting alcohol with isocyanate, reacting isocyanate with amine, and reacting amine with acid anhydride) do not involve the unsaturated moieties derived from the polyol. Consequently, the Seitz polyurethane contains unsaturated moieties derived from polyol.

By contrast, the polyurethane of claim 1 is prepared from saturated polyol and, as a result, does not contain unsaturated moieties. Thus, the claimed polyurethane is different from the Seitz polyurethane, which contains unsaturated moieties derived from polyol. In other words, claim 1 is not anticipated by Seitz.

For the same reasons set forth above, claims 2, 3, 5-9, 11, 12, 18, and 19, all dependent from claim 1, are also not anticipated by Seitz.

II

The Examiner rejects claims 1, 2, 4-13, 16, and 17 under 35 U.S.C. § 102(e) relying on Lamers et al., U.S. Patent Application Publication 2002/0114955 (Lamers).

As mentioned above, claim 1 is directed to a water-thinnable polyurethane having at least two free OH groups. So are claims 2, 4-13, 16, and 17, which depend from claim 1.

Lamers discloses a polyurethane material prepared by reacting polyisocyanate, an active hydrogen-containing compound, an amino compound, and an acid anhydride. In addition, this reference discloses, but does not claim, the water-thinnable polyurethane with at least two free OH groups claimed in the present application. The Examiner relies on this specific disclosure as 102(e) prior art against the present application.

Applicants disagree. It is well established that “even if applicant’s work was publicly disclosed prior to his or her application, applicant’s own work may not be used against him or her unless there is a time bar under 35 U.S.C. 102(b).” See MPEP 2136.05. Paul Lamers, one of the seven inventors named in Lamers, conceived a water-thinnable polyurethane with at least two free OH groups and described this subject matter in Lamers. Paul Lamers, Hans-Dieter Hille, and Karsten Jahny together reduced the conceived invention to practice while refining it. The

three of them claimed the invention in the present application, in which they were named as inventors. Clearly, the above-mentioned specific disclosure relied on by the Examiner is the three inventors' own work. Applicants have attached hereto a declaration by Paul Lamers under 37 CFR 1.132, which avers that the relevant disclosure is the work of the three inventors named in this application. According to the above-quoted MPEP statement, Lamers cannot be cited as prior art against the present application.¹

In view of the above remarks, Applicants respectfully request withdrawal of the rejection.

Rejections under 35 U.S.C. § 103 (a)

The Examiner rejects claims 14, 15, and 20 for obviousness relying on Lamers in view of Vandevoorde et al., U.S. Patent 6,429,256 (Vandevoorde).

Claims 14, 15, and 20, all indirectly dependent from claim 1, are directed to a polyurethane prepared by the procedures described above.

The Examiner cites Lamers as a 103(a) reference clearly on the ground that this reference qualifies as a 102(e) reference. As mentioned above, Lamers does not qualify as 102(e) prior art. Thus, it should be removed as a 103(a) reference.

Vandervoodre discloses a composition containing (1) a polyol having a carboxylate or carboxylic moiety and a sulfonate or sulfonic acid moiety, and (2) a cross-linking agent reactive to hydroxy groups. It does not teach polyurethane at all, let alone the polyurethane prepared by the procedures recited in claim 1 and required by claims 14, 15, and 20. In other words, with removal of Lamers as prior art, Vandervoodre alone does suggest the polyurethane of claim 14, 15, and 20.

For the reasons set forth above, Applicants respectfully request that this rejection be withdrawn.

¹ Lamers is not a 102(b) reference, as its publication date (i.e., August 22, 2002) is later than the priority date of the present application (i.e., March 23, 2002).

three of them claimed the invention in the present application, in which they were named as inventors. Clearly, the above-mentioned specific disclosure relied on by the Examiner is the three inventors' own work. Applicants have attached hereto a declaration by Paul Lamers under 37 CFR 1.132, which avers that the relevant disclosure is the work of the three inventors named in this application. According to the above-quoted MPEP statement, Lamers cannot be cited as prior art against the present application.¹

In view of the above remarks, Applicants respectfully request withdrawal of the rejection.

Rejections under 35 U.S.C. § 103 (a)

The Examiner rejects claims 14, 15, and 20 for obviousness relying on Lamers in view of Vandevoorde et al., U.S. Patent 6,429,256 (Vandevoorde).

Claims 14, 15, and 20, all indirectly dependent from claim 1, are directed to a polyurethane prepared by the procedures described above.

The Examiner cites Lamers as a 103(a) reference clearly on the ground that this reference qualifies as a 102(e) reference. As mentioned above, Lamers does not qualify as 102(e) prior art. Thus, it should be removed as a 103(a) reference.

Vandervoodre discloses a composition containing (1) a polyol having a carboxylate or carboxylic moiety and a sulfonate or sulfonic acid moiety, and (2) a cross-linking agent reactive to hydroxy groups. It does not teach polyurethane at all, let alone the polyurethane prepared by the procedures recited in claim 1 and required by claims 14, 15, and 20. In other words, with removal of Lamers as prior art, Vandervoodre alone does suggest the polyurethane of claim 14, 15, and 20.

For the reasons set forth above, Applicants respectfully request that this rejection be withdrawn.

¹ Lamers is not a 102(b) reference, as its publication date (i.e., August 22, 2002) is later than the priority date of the present application (i.e., March 23, 2002).

Applicant : Hans-Dieter Hille et al.
Serial No. : 10/509,218
Filed : March 10, 2005
Page : 10 of 10

Attorney's Docket No.: 13619-004US1 / 183/02001US

CONCLUSION

Applicants submit that the grounds for the objections and rejections asserted by the Examiner have been overcome and claims 1-20, as amended, cover subject matter that is novel and unobvious over the prior art. Applicants request that all pending claims be allowed.

Enclosed is a petition for two-month extension of time. Please apply any other charges to deposit account 06-1050.

Respectfully submitted,

Date: 2-14-07


Y. Rocky Tsao
Y. Rocky Tsao, Ph.D., J.D.
Attorney for Applicants
Reg. No. 34,053

Fish & Richardson P.C.
225 Franklin Street
Boston, MA 02110
Telephone: (617) 542-5070
Facsimile: (617) 542-8906

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Hans-Dieter Hille et al.

Serial No. : 10/509,218

Filed : March 10, 2005

Title : FUNCTIONALIZED POLYURETHANE

Art Unit : 1711

Examiner : Benjamin Gillespie

Conf. No. : 5136

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

DECLARATION OF PAUL LAMERS UNDER 37 C.F.R. § 1.132

I, Paul Lamers, hereby declare that:

1. I am an inventor of the subject matter described and claimed in the above-captioned patent application, i.e., a water-thinnable polyurethane with at least two free OH groups.
2. I am also an inventor of the subject matter described in U.S. Patent Application No. 09/961,096 ("prior application") titled "Curable polyurethanes; coatings prepared therefrom, and method of making the same," which was filed September 21, 2001.
3. Seven inventors, i.e., I myself, Jonathan T. Martz, Lawrence D. Meyers, Carolyn A. Novak, Kurt G. Olson, James P. Rowley, and Christopher A. Verardi, are named in the prior application. The application discloses, but does not claim, the water-thinnable polyurethane with at least two free OH groups claimed in the present application. The Examiner relies on this specific disclosure as prior art against the present application in an office action dated September 28, 2006.

Applicant : Hans-Dieter Hille et al.
Serial No. : 10/509,218
Filed : March 10, 2005
Page : 2 of 2

Attorney's Docket No.: 13619-004US1 / 183/02001US

4. The above-mentioned specific disclosure relied on by the Examiner is the work of the three inventors named in this application. More specifically, I devised the conception of a water-thinnable polyurethane with at least two free OH groups and, together with Hans-Dieter Hille and Karsten Jahny, reduced the conception to practice. Hans-Dieter Hille and Karsten Jahny are therefore also named as inventors in the present application.

5. All statements made herein of my knowledge are true and that all statements made on information and belief are believed to be true; and further these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patents issued thereon.

Date: 30 Jan 2007



Paul Lamers
Research Associate
PPG Industries, Inc.
4325 Rosanna Drive
Allison Park, Pennsylvania 15101

Fish & Richardson P.C.
225 Franklin Street
Boston, MA 02110
Telephone: (617) 542-5070
Facsimile: (617) 542-8906

21544977.doc